(b) retainer means attached to said pin for retaining said pin within said slot and for retaining said side skirt adjacent to said side panel; and

(c) stop means attached to the hood for limiting the extent of downward movement of the side skirts when the hood is raised away from the work table.

REMARKS

Drawings. The examiner objected to the drawings because they do not include reference signs 127, 153 included in the description. Drawing amendments are submitted herewith, shown in red ink, that include these reference signs. The digits 127 had inadvertently been rearranged to 172 in some of the Figures, and the incorrect reference numerals 172 have been corrected to 127 in the several Figures (shown in red ink).

The examiner objected to the drawings because they include the following reference signs not mentioned in the description: 21, 172, 231, 233, 238L. The sign 21 does appear in the description at page 17, line 8, and does not require correction. The sign 127 has been substituted, by drawing corrections, for the incorrect sign 172 in several Figures, as noted above, thereby achieving the desired correction with respect to sign 127. The specification has been amended at page 16, line 33, to indicate that sign 233 in FIG. 12 denotes apertures in tab extensions 206T. Sign 231 has been deleted from FIG. 12 (shown in red ink), inasmuch as it is not needed. The specification has been amended at page 17, line 26, by adding the following description of 238L:

A lock knob 238L inserted into threaded hole 238H reversibly locks portion 203M to portion 203S.

FIG. 14 has been corrected in red ink to label the threaded hole 238H. The lock knob 238L is not an essential feature of the invention, and forms no part of the claims 1-23, as amended, but is considered to be a desirable safety feature for species C of the invention.

Claims 1-23 remain pending in the application. Claim 5 and claims 10-23 are withdrawn from consideration as being drawn to a

non-elected species. Claims 1-4 and 6-9 were rejected.

Indefiniteness. The examiner stated that claim 1 is indefinite in that it is not clear how the side panels are structurally related to the device, and that the whereby clause of claim 1 does not define any structure and accordingly can not serve to distinguish. Indeed, the whereby clause has no relevance to the structural definiteness of claim 1; it is included merely to show how the hood functions in a working position when a work piece is being cut, and the path of travel of air through the device. Claim 1 has now been twice amended in order to more clearly state the structural relationships among the elements of the claim -- namely, that the upper and lower cowl, and the nose panel are each disposed between, and attached to, the side panels, in the particular manner set forth in twice amended claim 1.

The examiner stated that in claim 2, "the pivot means" and "said means" lack antecedent basis. Claim 2 has now been twice amended to remove the ambiguity, by deleting the word "pivot" in line 3 and by eliminating the phrase "said means" in line 11.

The examiner stated that "pivot means" in claim 7 lacks antecedent basis. This ambiguity has been cured by deleting "pivot" from line 2 of claim 7 (once amended).

The examiner stated that in claim 7, "the splitter" lacks antecedent basis. Claim 2 expressly recites the splitter, and claims 3-6 all depend from claim 2; therefore, this problem is cured by amending claim 7 so that it no longer depends from claim 1, but only depends from claims 2-6. Claim 7 has been amended accordingly.

Obviousness Rejection.

A. VOGL ET AL. NOT "SUBSTANTIALLY SIMILAR"

The examiner rejected claims 1-4, 6, 7, 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Vogl et al. in view of Waugh and Auel. The examiner stated that Vogl et al. "discloses the invention substantially as claimed" even though Vogl et al. does not disclose the following elements of claims 1-4,6, 7, 8 and 9 of this applicant's invention:

Elements Missing From Vogl et al.

(a) a pair of spaced-apart side panels (rigidly attached to the following elements);

(a) a nose panel having horizontal leading and trailing edges;

(b) a convexly curved upper cowl (mounted to the side panels) having a substantially vertical, front portion terminating at a forward edge that engages an upper surface of the nose panel; and having a rearwardly extending, upwardly inclined portion terminating at a rear edge; and

(c) a lower cowl (mounted to the side panels below the upper cowl) having a substantially vertical, front portion and rearwardly extending, substantially horizontal, central and rear portions, said front portion terminating in a forward edge disposed above the trailing edge of the nose panel.

The examiner stated that the invention described by Vogl et al. includes "a pair of spaced-apart vertical side panels (31,34) made of transparent material . . . . ," but those (so-called) "side panels," unlike this applicant's side panels, are not rigidly attached to Vogl's saw and dado guard; instead, they are pivotally attached by pivot screw 36 at a front end of the guard (see Vogl's FIG. 5), and they rotate about the pivot screw 36. So, Vogl et al. does not really have side panels at all in the sense that term is used in the present application. Since Vogl et al. is missing four essential, critical structural elements of the present invention, it is simply not true that Vogl et al. "discloses the invention essentially as claimed." Furthermore, not only does Vogl et al. completely lack the functionality of a hood for conducting saw dust away from the situs of cutting, their saw and dado guard does not even function as a guard substantially in the same way as the applicant's invention functions as a guard. The applicant's hood pivots upwards as a work piece is fed under the nose panel and into the rotating, circular saw blade and, afterwards, when the work piece has fully passed by the nose panel, the hood pivots downwards to a resting position on the work table, thereby sealing off the situs of cutting to prevent escape of sawdust from the hood. In

contrast, during wood cutting operations, Vogl et al.'s guard remains in a fixed position over the work table, rigidly attached to the mounting bracket (13). Vogl et al. provide two sets of panel-like guards -- a front (i.e., longer) set (31, 34) and a rear (i.e., shorter) set (32, 35), both sets pivotally mounted at their forward ends to the guard; furthermore, the front guards (31,34), and rear guards (32, 35) all have beveled edges (see, for example, beveled edge (39) in Vogl's FIG. 5) for engagement with a work piece being fed into the saw. This applicant's invention has only one set of side skirts (not a front set and a rear set), and the skirts are not provided with beveled front edges. Instead of Vogl's front guards (31, 34), this applicant supplies a canted, nose panel (surrounded by front portions of vertical side panels and by the upper cowl), for engagement with a work piece being fed into the saw. The most that can be said for any similarity between Vogl et al. and the present invention is that both have at least one set of side skirts or guard panels that move first up, and then down, as a work piece is slid under and past them during a wood cutting operation, and pins extending through slots in the skirts as a means for retaining the skirts to the guard/hood. Beyond that, there are essentially no similarities at all between the two inventions. In particular, Vogl et al. utterly fails to address the main point of the instant invention -- i.e., preventing sawdust from spewing out in all directions while cutting a work piece with a rotating circular saw blade.

B. WAUGH'S DUST COLLECTING DEVICE PROVIDES A DIFFERENT, AND INFERIOR AIR CIRCULATION PATH.

The examiner stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a dust collecting device as taught by Waugh on Vogl's device in order to provide a device to protect the user and to facilitate removal of sawdust by a directed air stream generated by a saw blade. Even assuming that these references are properly combinable (they are not, see below), there are several problems with this view. First, Vogl's panel-like guards (31, 34 and 32, 35) have

beveled front edges (39), thereby leaving both sides of the front portion of the saw blade uncovered and exposed, which defeats the very purpose we are trying to achieve -- namely, a fully enclosed compartment around the saw blade and work piece to prevent escape of sawdust from the hood. And, if we try to more fully enclose the saw blade by changing the beveled front edges (39) on Vogl's panel-like guards by making the front edges vertical and flush up with the front of Vogl's guard, then Vogl's panel-like guards (31,34 and 32,35) will no longer move up and down as we push a work piece past them (they need beveled edges for that), which destroys their functionality -- they become even worse than useless because they then actually impede feeding the work piece into the saw blade. Second, even if we could somehow solve that problem, the front portion of the guard (immediately in front of the saw blade) would still remain exposed anyway, so we would still not have a fully enclosed compartment around the saw blade to prevent escape of saw dust. Which leads to the third point: This means that mounting Waugh's device for collecting dust (20) (see Waugh's FIG. 1) on top of Vogl's guard with its front end (36) disposed over Vogl's pivoting screw (36) and with its vacuum source connector (60) attached to a vacuum source (64), would separately suck air through Waugh's front end (36) and through Waugh's rear vacuum aperture (54) -- quite unlike this applicant's hood, which sucks air in through a rear intake port[1] in his hood, draws it forward over the saw blade, and thence up and between the applicant's upper and lower cowls, carrying saw dust with it. This is an important distinction because mere rotation of the saw blade itself sets up an air circulation pattern that directs air forwardly over the blade, and the applicant's vacuum-induced air circulation pattern works in conjunction and in harmony with that, whereas Waugh's directing air through his rear vacuum aperture (54) fights against

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[1] The intake port is "defined by rear portions of the side panels and the rear portion of the lower cowl;" see whereby clause of claim 1 (twice amended).

that natural pattern of air flow. So, even if the suggested application of Waugh's device to Vogl et al.'s guard could somehow be physically accomplished,[2] the resulting device would provide an inferior air circulation pattern anyway for conducting dust away from the situs of cutting --- and, even after all that trouble, we would still wind up with a device that is not the applicant's invention.[3] That is, not only would the combination fail to give us the required air circulation pattern, but the above-listed missing structural elements would remain missing -- for instance, we would still be missing the applicant's spaced-apart, side panels, which are capable of straddling the saw blade while his side skirts rest flush on the work table (see the applicant's FIG. 2A); and we would still be missing the canted nose panel (70). Vogl et al. in view of Waugh simply fails to teach this.

C. ADDING AUEL TO THE COMBINATION DOES NOT SOLVE THE PROBLEMS AND WOULD NOT SATISFY AN IMPORTANT OBJECT OF APPLICANT'S INVENTION

By citing Auel's U.S. patent, the examiner sought to furnish his proposed combination with a forwardly inclined nose (6), a splitter plate (1) and outer guards (10) having a plurality of openings (11) pivoted to the splitter by a bolt (9). Auel's device is a saw guard only, and makes no provision for conducting saw dust away from the situs of cutting a work piece. If a way could be found to combine Auel's nose (6), splitter plate (1) and pivotal connection to the splitter (1) by bolt (9) with the above-discussed features of the inventions of Vogl et al. and of Waugh, we would, admittedly, have a device structurally closer to the applicant's hood than the combinations discussed above. Nevertheless, even

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[2] At the very least, it would require punching a hole through a rear portion of Vogl's flat, transparent panel (24) to permit air below the panel (24) to enter Waugh's rear vacuum aperture (54).

[3] Note that the applicant's invention teaches placing the nose panel 70 in direct contact with the work piece, whereas Waugh does not provide for direct contact of the front vacuum aperture portion 52 of his device 20 with the work piece -- instead, only Waugh's base plate 16 actually contacts the work piece.

after combining the teachings of all three references we would still not have achieved this applicant's invention as claimed in his claims 1-4, 6, 7, 8, and/or 9. Neither Auel, nor Waugh nor Vogl et al. teach how to combine Auel's nose (6) with Waugh's front end (36). Auel leaves his nose (6) fully exposed, not at all enclosed. Waugh leaves the situs of cutting fully exposed on his portable saw. It is only the applicant who teaches us to fully enclose the entire upper peripheral portion of the saw blade while cutting a work piece (except for a rear intake port), thereby to conduct air forwardly over the blade and thence up and between upper and lower cowls as a means to most completely remove dust from the situs of cutting. Thus, even combining the teachings of all three of these references, we still do not arrive at the applicant's invention.

Combining Waugh with Vogl et al. with Auel is impermissible as a matter of law.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984), as cited in In re Geiger, 815 F.2d at 688, 2 USPQ2d at 1278 (Fed. Cir. 1987). There is nothing in the Waugh, Vogl et al., and/or Auel references, nor anything in the prior art generally to suggest to a person of ordinary skill the modifications proposed by the examiner. Absent such a showing in the prior art, the examiner has impermissibly used the applicant's teaching to hunt through the prior art for the claimed elements and combined them as claimed. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990); In re Lashowski, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989).

WHEREFORE, the applicant requests that the amendments proffered above be entered, that the claim rejections for indefiniteness and for obviousness be reconsidered, and that claims 1-4, 6, 7, 8, and 9 be allowed, as amended.

Respectfully submitted this 22nd day of June, 2000

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CERTIFICATION UNDER 35 CFR §1.10

I hereby certify that this transmittal and the documents referred to as attached there are being deposited with the United States Postal Service on this date, June 22, 2000, in an envelope as "Express Mail Post Office to Address" mailing label number EL423296724US, addressed to the Assistant Commissioner for Patents, Box NonFee Amendments, Washington, D.C. 20231.

BRIAN J. COYNE
(Type or print name of person mailing paper)

Brian J. Coyne
(Signature of person mailing paper)